

Some of the characteristics of genus *Bulbophyllum* are: Inflorescence racemose, usually strongly bent at the base of rachis; the lateral sepals less than twice the length of the dorsal sepal; flowers 0.56-6.00 mm long. The fresh specimens were found to be different in several characters from other *Bulbophyllum* species. The new taxon is closely allied to *Bulbophyllum triste* Rehb. f. from which it differs as shown in Table 1.

**Etymology:** Because of its prominent yellow colour the new species is named *flavida*.

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THREE NEW GENERA OF COCCIDAE (HOMOPTERA : COCCOIDEA)<sup>1</sup>

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(With two text-figures)

Three new genera: *Varshneococcus*, *Sharanococcus* and *Prococcus* based on *Coccus* species are proposed.

The revision of Indian species of *Coccus* Linnaeus reveals that the species *C. adersi* (Newstead), *C. bicruciatu*s (Green), *C. watti* (Green) and *C. acutissimus* (Green) are not congeneric, though they have affinities with *Coccus* in the absence or presence of few tubular ducts on venter. The presence of oval anal plates in *C. adersi*, *C. bicruciatu*s and *C. watti*; numerous stigmatic spines in *C. adersi*; reduced legs and antennae in *C. acutissimus* distinctly separate these species from *Coccus*. We therefore propose three new genera — *Varshneococcus* for *C. adersi*, *Sharanococcus* for *C. bicruciatu*s and *C. watti*, and *Prococcus* for *C. acutissimus*.

KEY TO SOME RELATED GENERA OF COCCIDAE,  
BASED ON ADULT FEMALES

1. Legs and antennae well developed ..... 2
- Legs and antennae absent or much reduced ..... 6
2. Stigmatic spines 2-3 ..... 3
- Stigmatic spines numerous .....  
..... *Varshneococcus* gen. nov.
3. Anal plates together roughly quadrate with cepha-

- lateral and caudolateral margins forming distinct lateral angles ..... 4
- Anal plates together oval with cephalolateral and caudolateral margins fused together to form a continuous curve ..... *Sharanococcus* gen. nov.
4. Stigmatic spines 3, median longer than laterals; para-opercular pores if present never extend up to head ... 5
- Stigmatic spines 2 of equal size on either end of the sclerotized band; para-opercular pores numerous, arranged in a band along median line of the body and extended as far as the head .....  
..... *Marsipococcus* Cockerell & Bueker
5. Dorsum with large tessellation. ....  
..... *Eucalymnatus* Cockerell
- Dorsum without tessellation ..... *Coccus* Linnaeus
6. Cribiform plates present on dorsum ..... 7
- Cribiform plates absent on dorsum. ....  
..... *Prococcus* gen. nov.
7. Legs and antennae rudimentary; derm around anal plates unsclerotized ..... *Cribrolecanium* Green
- Legs and antennae absent; derm around anal plates strongly sclerotized ..... *Akermes* Cockerell

Genus *Varshneococcus* gen. nov.

**Type-species:** *Lecanium adersi* Newstead, 1917.

**Diagnostic features:** *Shape:* Mounted specimens irregularly oval. *Dorsum:* Setae

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minute and spiniform. Para-opercular pores and submarginal tubercles absent. Tubular ducts few on submargins of body. Anal plates together oval, with cephalolateral and caudolateral margins fused together to form a continuous curve; each plate with three apical and four subapical setae. *Margin*: Setae small, curved, dilated apically. Stigmatic clefts each with 18-24 cylindrical setae of variable length and diameter. *Venter*: Quinquelocular pores few near cleft and spiracular opening. Multilocular pores absent. Tubular ducts few, confined to genital opening. Antennae 7-segmented, sometimes 6-segmented. Legs well developed, without tibio-tarsal articular sclerites; claws simple.

The new genus has affinities with *Sharanococcus* gen. nov. in having oval anal plates but distinctly differs from it in having numerous stigmatic spines. It is named after Dr R.K. Varshney, Scientist, Zoological Survey of India, Calcutta, for his contribution to the study of Coccoidea.

*Varshneococcus adersi* (Newstead), comb. nov.  
(Fig. 1)

*Lecanium adersi* Newstead, 1917: 357.

*Coccus adersi* (Newstead); De Lotto, 1959: 155; Arasthi & Shafee, 1991: 330.

**Material examined:** One slide with two adult females, labelled: *Lecanium adersi* Newstead, from Mango, Zanzibar, 1913, R. Newstead (BMNH).

The species was redescribed and illustrated in detail by De Lotto (1959) and Avasthi & Shafee (1991).

Genus *Sharanococcus* gen. nov.

**Type-species:** *Lecanium bicruciatum* Green, 1904.

**Diagnostic features:** *Shape*: Mounted specimens more or less oval. *Dorsum*: Setae minute and spiniform. Para-opercular pores and submarginal tubercles absent. Anal plates together oval with cephalolateral and caudolateral margins fused together to form a

continuous curve; each plate with three apical and one subapical setae. *Margin*: Setae small, curved, simple, bifid and fimbriate. Stigmatic clefts each with large chitinized rim and three spines. *Venter*: Quinquelocular pores in a row between spiracles and stigmatic clefts. Multilocular pores absent. Tubular ducts few, around genital opening only. Antennae 6 to 7-segmented. Legs well developed, without tibio-tarsal articular sclerites; claws simple.

The genus is represented by two species. The new genus has affinities with *Varshneococcus* gen. nov. in having oval anal plates but distinctly differs from it in having three stigmatic spines. It is named after Dr. Sharan Behari Goswami, Ex-Principal, I.O.P., Vrindaban, for his constant inspiration for work.

KEY TO SPECIES OF *Sharanococcus* GEN. NOV.,  
BASED ON ADULT FEMALES

1. Marginal setae bifid and fimbriate .....  
..... *S. bicruciatum* (Green)
- Marginal setae simple ..... *S. watti* (Green)

*Sharanococcus bicruciatum* (Green), comb. nov.  
(Fig. 2)

*Lecanium bicruciatum* Green, 1904 : 214.

*Coccus bicruciatum* (Green); Green, 1904: 248; De Lotto, 1957 : 299; Avasthi & Shafee, 1991 : 331.

**Material examined:** One slide with three adult females, labelled: *Coccus bicruciatum* (Green), on *Capparis mitohrili*, August 12, 1931; Chinrhilla (NMNH).

The species was redescribed and illustrated in detail by De Lotto (1957) and Avasthi & Shafee (1991).

*Sharanococcus watti* (Green), comb. nov.

*Lecanium watti* Green, 1900 : 6.

*Coccus watti* (Green); Rao & Kumar, 1952 : 3; Avasthi & Shafee, 1991 : 345.

*Saissetia watti* (Green); Ali, 1971 : 45.

The species was redescribed and illustrated in detail by Rao and Kumar (1952).



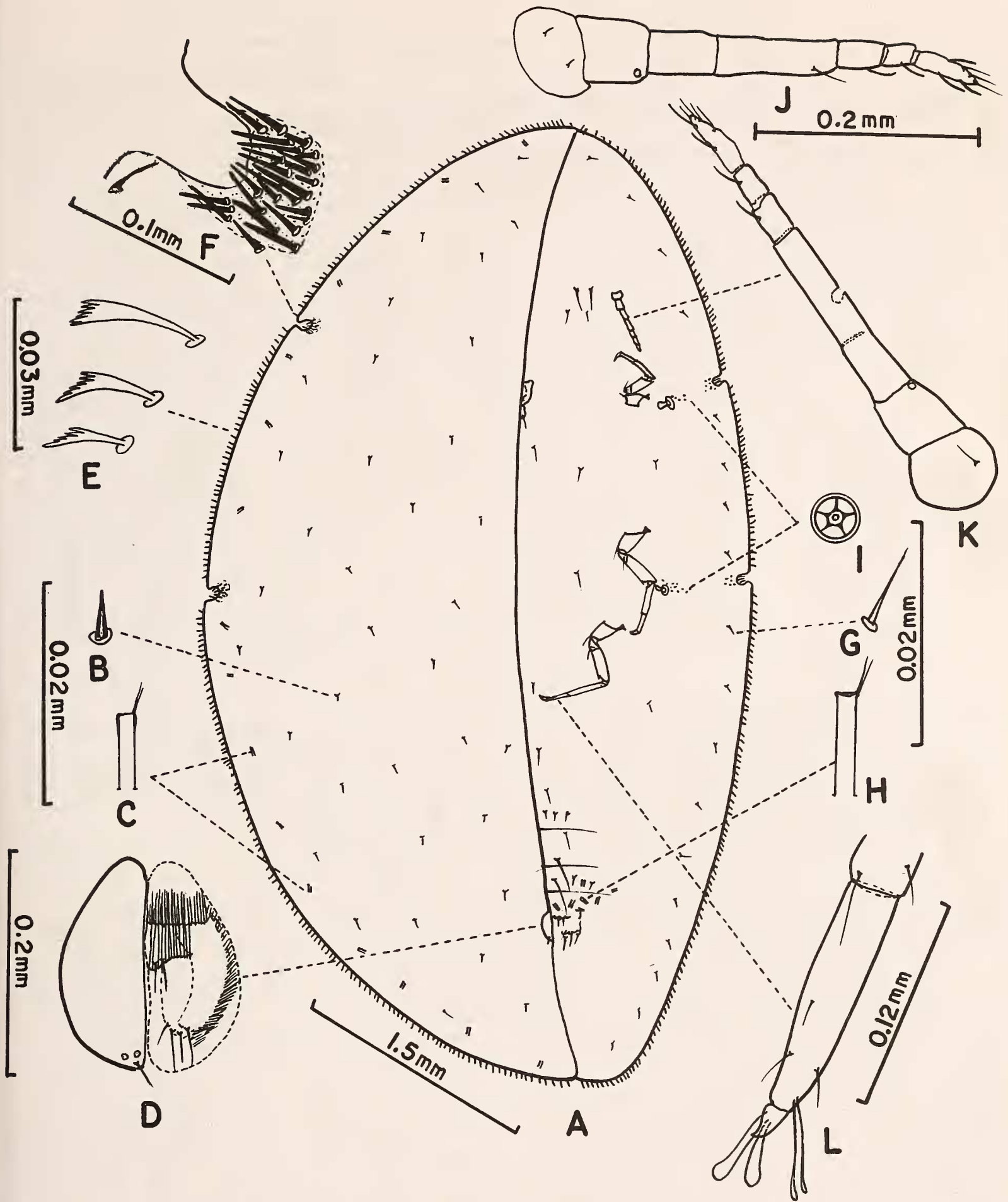


Fig. 1. *Varshneococcus adersi* (Newstead) comb. nov. female. See text for explanations.

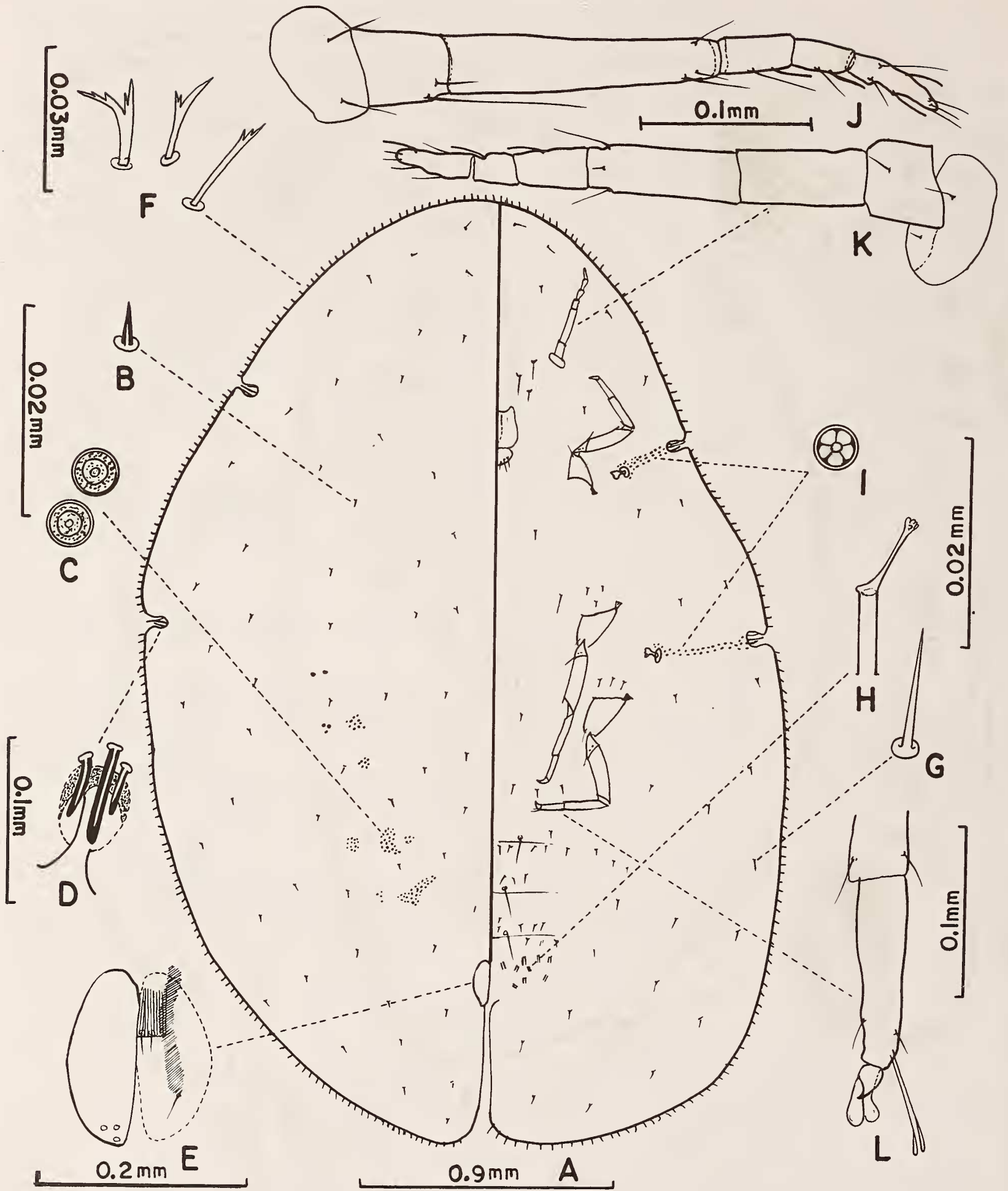


Fig. 2. *Sharanococcus bicruciatu* (Green) comb. nov. female. See text for explanations.

Genus *Prococcus* gen. nov.

**Type-species:** *Lecanium acutissimum* Green, 1896.

**Diagnostic features:** *Shape:* Body of adult female elongate, slender and pointed at apices. *Dorsum:* Membranous but strongly sclerotized in older specimens. Setae spinose with pointed or blunt apices, clavate or cylindrical with almost truncate apices. Submarginal tubercles present. Para-opercular pores variable in number. Anal plates more or less quadrate with distinct lateral angles; each plate with two subapical, three apical and one subdiscal setae. *Margin:* Setae slender, pointed and sparse. Stigmatic clefts with three setae, median much longer than laterals. *Venter:* Quinquelocular pores in a single row between spiracles and stigmatic clefts. Multilocular pores few, confined in anal region and on preceding 2-3 abdominal segments. Tubular ducts absent. Antennae much reduced; 3-segmented, sometimes with membranous division indicating five segments. Legs greatly reduced, tibia and tarsus fused

together; claws simple.

The new genus has affinities with *Cribrolecanium* Green in having reduced legs and antennae but distinctly differs from it in the absence of cribiform plates on dorsum. The generic diagnosis is based on the illustrations and description given by Gill *et al.* (1977) for *Coccus acutissimus* (Green).

*Prococcus acutissimus* (Green), comb. nov.

*Lecanium acutissimum* Green, 1896 : 10.

*Coccus acutissimus* (Green); Gill *et al.*, 1977 : 12; Avasthi & Shafee, 1991: 330.

Gill *et al.* (1977) redescribed and illustrated the species in detail.

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